Pneumatic actuator (A/R series)

Aluminum Body

is anodized to prevent internal/external scratches and thus securing long product life.

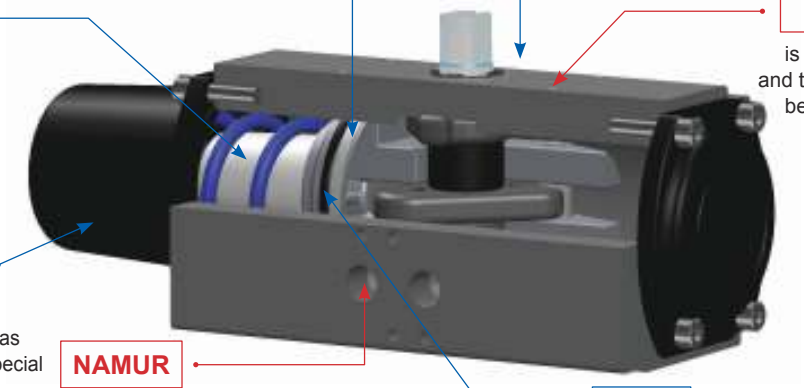
As there is no friction between metal to metal, product life is long and without noise.

Spring Cap

enables safer assembly/disassembly.

ISO5211/DIN3337

is the international standards, and thus the products can easily be fitted (assembled) with the accessories.



Aluminum Cover

is not easily peeled off, and its polish can last long as it is powder coated upon special surface treatment.

NAMUR

is the international standard, and thus the products can easily be fitted with solenoid valves.

NBR

The products can be used at low/high temperature as the products are available in EPDM and/or VITON in addition to the standard NBR.

▶Model range



A D 65

① ②

①	A series - Scotch yoke R series - Rack &pinion
②	D-Double acting S-Spring return
③	Internal diameter

AD	50/65/80/100/125/140/160/185/210/250/300
AS	50/65/80/100/125/140/160/185/210/250/300
RD	32/40/50/65/80/90/100/115/125/140/160/185/210
RS	40/50/65/80/90/100/115/125/140/160/185/210

▶Model code

A6ND-AKKB-1012C27-OP

ⓐ ⓑ ⓒ ⓓ ⓔ ⓕ ⓖ ⓗ ⓘ ⓙ ⓚ

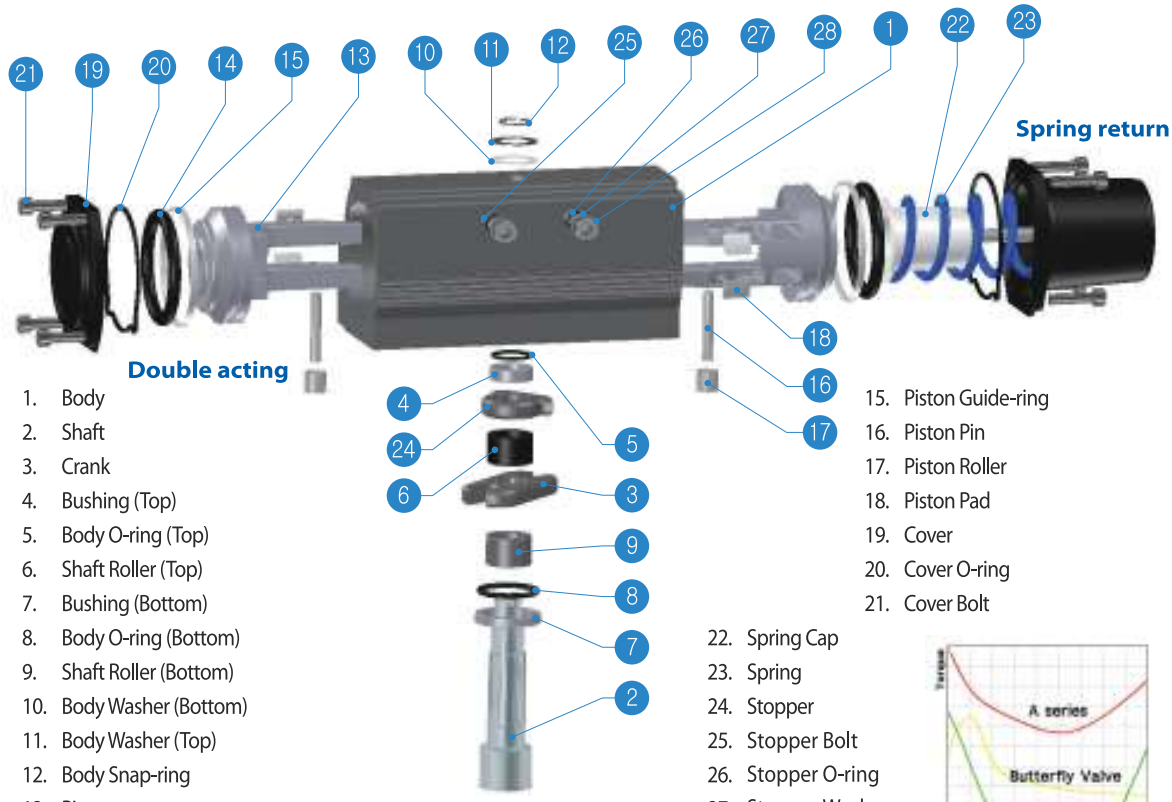
ⓐ Mechanism	ⓓ SPRING	ⓔ Action	ⓕ Body color	ⓗ Indicator	ⓘ ISO5211	ⓚ OPTION
A:scotch yoke R:rack pinion	D:Double acting W:Weak spring M:Middle spring S:Strong spring H:Hand wheel No.:RS spring q'ty	A:Action A (Fail closed) B:Action B (Fail open) C:Action C (Fail closed/Open CW) D:Action B (Fain open/Open CW)	K:Black L:Blue W:White Y:Yellow R:Red	A:A type B:B type C:C type D:D type	3:F03 5:F05 ⋮	T4:PT1/4 T8:PT3/8 T2:PT1/2 N4:NPT1/4 N8:NPT3/8 N2:NPT1/2
ⓑ Diameter			**ⓖ Cover color**		**ⓙ STEM**	O45:Open -45˚ (center stopper) SE1:end cap stopper HW:Hand wheel
3:32 4:40 ⋮			K:Black L:Blue M:Mint R:Red		C11:11*11 C14:14*14	
ⓒ O-RING						
N:NBR V:VITION (High temp.) E:EPDM(Low temp.)						

KOSAPLUS

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• E-mail:oversea@kosaplus.com • Tel:+82-31-433-3159 / Fax; +82-31-433-3151
Catalog Version : 4.1AR (Nov.2016)

-Data contained in the Catalog may be subject to change without advance notice for improvement of performance&safety of Product.
-Contact us for the most recent product and technical information. Visit our website for more details: http://www.kosaplus.com

▸Part list

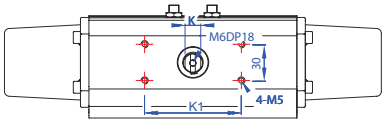


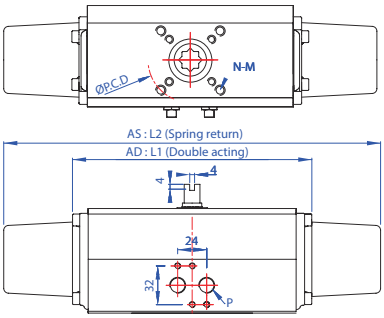
1. Body
2. Shaft
3. Crank
4. Bushing (Top)
5. Body O-ring (Top)
6. Shaft Roller (Top)
7. Bushing (Bottom)
8. Body O-ring (Bottom)
9. Shaft Roller (Bottom)
10. Body Washer (Bottom)
11. Body Washer (Top)
12. Body Snap-ring
13. Piston
14. Piston O-ring
15. Piston Guide-ring
16. Piston Pin
17. Piston Roller
18. Piston Pad
19. Cover
20. Cover O-ring
21. Cover Bolt
22. Spring Cap
23. Spring
24. Stopper
25. Stopper Bolt
26. Stopper O-ring
27. Stopper Washer
28. Stopper Nut

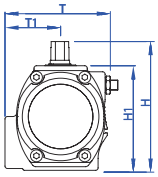
▸Operating mechanism

DOUBLE ACTING	Action "A"	Open	Close
SPRING RETURN	Action "A" (Fail Close)	Open	Close
	Action "B" (Fail Open)	Close	Open

▸Dimension table

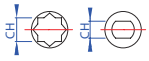






P	
A50~A210	PT1/4
A250/A300	PT1/4
	#PT3/8
	#PT1/2

MOUNT IMAGE



unit : mm

MODEL	K1	ISO	P.C.D(Ø)	N-G	K	L1	L2	T	T1	H	H1	CH	DTH	AD Wt(Kg)	AS Wt(Kg)
A50	80	F03/F05/ F07	36/50/70	4-M5/M6/M8	9	162	257	75	40	90	70	11*11	13	1.4	1.6
												#14*14	14		
												#9.7*ø15	14		
A65	80	F05/F07	50/70	4-M6/M8	13	202	314	89	46	107	87	14*14	17	2.3	3.0
												#11.7*ø17	17		
												#9.7*ø15	14		
A80	80	F07	70	4-M8	13	262	430	101	49.5	126	106	17*17	19	3.9	5.3
												#14.7*ø19	20		
A100	80	F07/F10	70/102	4-M8/M10	19	311	500	129	61.5	148	128	22*22	26	6.7	9.5
												#17.7*ø22	26		
A125	80	F07/F10	70/102	4-M8/M10	19	390	606	151	71.5	174	154	22*22	26	11.3	17.6
A140	80	F10/F12	102/125	4-M10/M12	24	431	682	164	77	192	172	27*27	30	16.4	23.9
												#22*22			
A160	80	F14	140	4-M16	24	506	781	188	89	216	196	36*36	30	23.7	36.6
		#F10/F12	#102/125	#4-M10/M12								#27*27			
A185	80	F14	140	4-M16	24	578	894	217	102	244	224	36*36	30	34.8	56.9
A210	130	F16	165	4-M20	36	605	982	231	115	284	254	46*46	60	45.5	77.2
		#F14										#36*36	50		
A250	130	F16	165	4-M20	36	755	1108	301	152	335	305	46*46	60	65.8	119.6
A300	130	F16/F25	165/254	4-M20/8-M16	36	900	1344	360	170	408	378	55*55	60	165.0	275.5

▪'#' is optional.

▸Selection guide

Valve Size		Double acting		Spring return	
		Ball valve	Butterfly valve	Ball valve	Butterfly valve
1/2"	15A	AD50		AS50	
3/4"	20A				
1"	25A			AS65	
1-1/4"	32A	AD65			
1-1/2"	40A		AD50		AS50
2"	50A			AS80	
2-1/2"	65A	AD80			AS65
3"	80A		AD65	AS100	
4"	100A	AD100		AS125	AS80
5"	125A	AD125	AD80	AS140	
6"	150A	AD140		AS160	AS100
8"	200A	AD160	AD100	AS185	
10"	250A	AD185		AS210	AS125
12"	300A	AD210	AD125	AS250	AS140
14"	350A	AD250	AD140	AS300	AS160
16"	400A	AD300	AD160		AS185
18"	450A		AD185		AS210
20"~22"	500A~550A		AD210		AS250
24"~32"	600A~800A		AD250		AS300
34"~40"	850A~1000A		AD300		

▪The above data is for reference only; the actual assembly may be different depending on valve material, pressure, structure, fluid and operational environment.
▪The data is not legally effective and therefore should not be used as legal ground.

▸AD series Torque table

unit : Nm

Model	Angle	SupplyAir											
		3Bar		4Bar		5Bar		6Bar		7Bar		8Bar	
		Close	Open	Close	Open	Close	Open	Close	Open	Close	Open	Close	Open
AD50	0˚	31.4	24.7	42.8	32.3	54.2	39.9	66.5	47.5	78.9	54.2	92.2	60.8
	45˚	15.2	15.2	20.0	20.0	25.7	24.7	30.4	29.5	36.1	34.2	40.9	39.9
	90˚	23.8	29.5	31.4	39.9	39.0	48.5	46.6	59.9	53.2	71.3	60.8	82.7
AD65	0˚	77.9	54.2	108.3	69.4	138.7	84.6	169.1	99.8	199.5	115.0	229.9	130.2
	45˚	35.2	33.3	45.6	43.7	57.0	55.1	68.4	65.6	80.8	76.0	92.2	87.4
	90˚	52.3	65.6	69.4	88.4	85.5	111.2	102.6	134.0	119.7	156.8	136.8	179.6
AD80	0˚	152.0	99.8	209.0	133.0	266.0	166.3	323.0	199.5	380.0	228.0	437.0	261.3
	45˚	66.5	57.0	90.3	76.0	109.3	95.0	133.0	114.0	156.8	137.8	175.8	161.5
	90˚	04.5	118.8	137.8	166.3	166.3	218.5	199.5	266.0	232.8	318.3	266.0	365.8
AD100	0˚	232.8	180.5	323.0	247.0	399.0	304.0	475.0	365.8	560.5	418.0	646.0	470.3
	45˚	114.0	109.3	152.0	147.3	190.0	185.3	232.8	223.3	275.5	266.0	318.3	304.0
	90˚	190.0	190.0	256.5	266.0	318.3	342.0	384.8	418.0	446.5	494.0	508.3	560.5
AD125	0˚	551.0	389.5	750.5	508.3	997.5	631.8	1,197.0	745.8	1,396.5	855.0	1,596.0	959.5
	45˚	247.0	242.3	332.5	323.0	413.3	399.0	498.8	475.0	584.3	555.8	665.0	631.8
	90˚	394.3	451.3	527.3	612.8	646.0	821.8	774.3	983.3	893.0	1,144.8	1,002.3	1,306.3
AD140	0˚	741.0	589.0	1,026.0	779.0	1,311.0	969.0	1,596.0	1,159.0	1,881.0	1,339.5	2,166.0	1,491.5
	45˚	337.3	318.3	451.3	427.5	570.0	532.0	684.0	641.3	798.0	750.5	912.0	864.5
	90˚	527.3	579.5	693.5	788.5	878.8	1,007.0	1,040.3	1,263.5	1,206.5	1,539.0	1,368.0	1,805.0
AD160	0˚	1,121.0	902.5	1,539.0	1,187.5	1,947.5	1,472.5	2,384.5	1,748.0	2,850.0	2,033.0	3,325.0	2,299.0
	45˚	522.5	503.5	703.0	674.5	878.8	845.5	1,059.3	1,011.8	1,235.0	1,182.8	1,415.5	1,349.0
	90˚	845.5	978.5	1,125.8	1,363.3	1,401.3	1,805.0	1,676.8	2,123.3	1,947.5	2,503.3	2,208.8	2,883.3
AD185	0˚	1,833.5	1,187.5	2,470.0	1,520.0	3,097.0	1,900.0	3,686.0	2,251.5	4,294.0	2,584.0	4,902.0	2,888.0
	45˚	802.8	817.0	1,073.5	1,092.5	1,339.5	1,349.0	1,605.5	1,615.0	1,881.0	1,890.5	2,156.5	2,147.0
	90˚	1,311.0	1,406.0	1,729.0	1,919.0	2,137.5	2,441.5	2,527.0	3,021.0	2,916.5	3,581.5	3,296.5	4,256.0
AD210	0˚	2,137.5	1,976.0	2,945.0	2,612.5	3,724.0	3,163.5	4,560.0	3,676.5	5,367.5	4,218.0	6,317.5	4,750.0
	45˚	1,083.0	1,102.0	1,444.0	1,491.5	1,805.0	1,852.5	2,166.0	2,223.0	2,527.0	2,593.5	2,897.5	2,945.0
	90˚	1,748.0	1,824.0	2,318.0	2,432.0	2,878.5	3,068.5	3,458.0	3,705.0	4,028.0	4,322.5	4,617.0	4,940.0
AD250	0˚	4,180.0	3,277.5	5,700.0	4,275.0	7,220.0	5,272.5	8,835.0	6,222.5	10,260.0	7,125.0	11,780.0	7,970.5
	45˚	1,890.5	1,890.5	2,498.5	2,498.5	3,087.5	3,097.0	3,705.0	3,743.0	4,341.5	4,389.0	4,968.5	4,978.0
	90˚	3,201.5	3,448.5	4,218.0	4,617.0	5,158.5	5,776.0	6,080.0	6,944.5	7,039.5	8,189.0	7,970.5	9,443.0
AD300	0˚	7,211.0	5,049.0	9,615.0	6,732.0	14,422.0	10,099.0	15,984.4	11,193.1	17,306.4	12,118.8	18,222.2	12,760.1
	45˚	2,970.0	2,970.0	3,960.0	3,960.0	5,940.0	5,940.0	6,583.5	6,583.5	7,128.0	7,128.0	7,505.2	7,505.2
	90˚	5,049.0	7,211.0	6,732.0	9,415.0	10,099.0	14,422.0	11,193.1	15,984.4	12,118.8	17,306.4	12,760.1	18,222.2

▸AS series Torque table

unit : Nm

Model	Angle	Spring torque: Weak			Spring torque: Middle				Spring torque: Strong			
		Spring	Air:3Bar	Air:4Bar	Spring	Air:4Bar	Air:4.5Bar	Air:5Bar	Spring	Air:6Bar	Air:7Bar	Air:8Bar
AS50	0˚	10.5	14.3	21.9	16.2	19.0	22.8	26.6	23.0	28.3	35.2	42.8
	45˚	8.2	6.7	11.9	12.0	8.2	10.8	13.6	16.5	14.3	20.0	24.7
	90˚	16.2	7.6	17.1	24.2	6.2	11.4	16.2	33.3	14.0	23.8	33.3
AS65	0˚	29.5	35.2	53.2	43.7	41.3	49.4	58.0	56.6	64.9	83.6	95.0
	45˚	15.6	17.1	28.5	24.9	17.6	23.3	28.5	34.4	32.3	44.7	56.1
	90˚	29.2	28.5	47.0	47.2	20.0	30.6	41.2	65.2	39.9	60.8	84.6
AS80	0˚	47.5	71.3	104.5	76.0	76.0	95.0	114.0	114.0	123.5	156.8	190.0
	45˚	33.3	28.5	52.3	42.8	33.3	42.8	57.0	61.8	61.8	80.8	99.8
	90˚	61.8	47.5	95.0	85.5	42.8	61.8	85.5	118.8	85.5	128.3	171.0
AS100	0˚	95.0	109.3	161.5	114.0	133.0	166.3	199.5	152.0	237.5	299.3	356.3
	45˚	61.8	47.5	90.3	76.0	57.0	76.0	95.0	99.8	118.8	161.5	204.3
	90˚	109.3	61.8	133.0	152.0	61.8	99.8	133.0	209.0	152.0	228.0	304.0
AS125	0˚	109.3	332.5	465.5	285.0	318.3	384.8	451.3	408.5	470.3	589.0	712.5
	45˚	57.0	180.5	261.3	166.3	161.5	204.3	247.0	237.5	247.0	327.8	408.5
	90˚	118.8	313.5	489.3	318.3	237.5	318.3	408.5	446.5	384.8	560.5	712.5
AS140	0˚	133.0	475.0	674.5	384.8	460.8	555.8	655.5	574.8	693.5	883.5	1,073.5
	45˚	85.5	228.0	342.0	228.0	199.5	247.0	313.5	332.5	318.3	427.5	532.0
	90˚	152.0	251.8	532.0	446.5	275.5	375.3	475.0	617.5	465.5	674.5	883.5
AS160	0˚	313.5	627.0	921.5	503.5	750.5	902.5	1,045.0	888.3	1,059.3	1,339.5	1,615.0
	45˚	194.8	299.3	475.0	289.8	380.0	465.5	551.0	498.8	508.3	679.3	850.3
	90˚	384.8	460.8	826.5	536.8	608.0	769.5	950.0	940.5	731.5	1,121.0	1,520.0
AS185	0˚	456.0	912.0	1,282.5	1,035.5	921.5	1,111.5	1,292.0	1,548.5	1,292.0	1,634.0	1,976.0
	45˚	266.0	513.0	779.0	579.5	465.5	598.5	741.0	874.0	703.0	969.0	1,235.0
	90˚	541.5	798.0	1,301.5	1,140.0	608.0	855.0	1,092.5	1,681.5	931.0	1,415.5	1,928.5
AS210	0˚	418.0	1,577.0	2,156.5	1,206.5	1,491.5	1,833.5	2,109.0	1,681.5	2,375.0	2,945.0	3,515.0
	45˚	247.0	779.0	1,149.5	674.5	717.3	921.5	1,097.3	1,035.5	1,092.5	1,463.0	1,833.5
	90˚	475.0	1,197.0	1,824.0	1,239.8	978.5	1,349.0	1,719.5	1,947.5	1,472.5	2,099.5	2,707.5
AS250	0˚	731.5	2,631.5	3,686.0	2,213.5	2,555.5	3,097.0	3,610.0	3,277.5	3,942.5	4,864.0	5,776.0
	45˚	418.0	1,425.0	2,090.0	1,254.0	1,282.5	1,605.5	1,947.5	1,738.5	2,071.0	2,726.5	3,363.0
	90˚	874.0	2,299.0	3,515.0	2,432.0	1,767.0	2,318.0	2,945.0	3,315.5	2,888.0	4,028.0	5,168.0
AS300	0˚	-	-	-	6,421.0	3,637.9	4,308.0	4,547.3	8,566.0	5,740.0	6,361.8	7,270.7
	45˚	-	-	-	2,283.0	1,834.1	2,172.0	2,292.7	3,046.0	2,894.0	3,207.5	3,665.7
	90˚	-	-	-	3,266.0	3,712.2	4,396.0	4,640.2	4,359.0	5,857.0	6,491.5	7,418.9

▪You may select spring types from strong/middle/weak; if unspecified in P/O, the standard type (as shown in the blue box) is provided.